UNITED STATES PATENT AND TRADEMARK OFFICE

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10/714,158	11/13/2003	Keith Sinclair	50325-0811	2371

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/714,158	SINCLAIR ET AL.
Office Action Summary	Examiner	Art Unit	
	La Juania N. Mouzon	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>24 December 2007</u>.
2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-9,11-20,22-30 and 32-35</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-9,11-20,22-30 and 32-35</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This Office Action is in response to Applicant's Amendment filed 12/24/2007.

Claims 1-9, 11-20, 22-30, and 32-35 are pending. Claims 10, 21, and 31 are canceled.

Claim Objections

2.   Claim 15 is rejected to because of the following informalities: claim 15 line(s) 23

has misplaced period. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
            obviousness or nonobviousness.

3.   Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Baekelmans et al. (US 7,080,141) in view of Menard et al. (US 7,065,566).

4.   In regards to claims 1 and 22 Baekelmans et al. discloses, a method and a

computer-readable storage medium for rule-based network management, the method

comprising the computer-implemented and a computer-readable storage medium

carrying one or more sequences of instructions for rule-based network management,

which instructions, when executed by one or more processors, cause the one or more

processors to carry out the steps of:

      a.   defining and storing a set of rules in one or more Rule-Based Markup

      Language ("RBML") documents, wherein the one or more RBML documents

      include one or more tags defining one or more rule elements, and wherein the

      set of rules includes **(Col. 7 line(s) 42-53 and Col. 9 line(s) 1-7)**:

            i.   a symptom-event rule that identifies as a symptom a particular

            event occurring **(Col. 9 line(s) 8-16)** within a first network in a plurality of

            networks **(Col. 7 line(s) 10-19, Col. 10 line(s) 46-49)**; and

            ii.   a problem-diagnosis rule that defines a problem within the network

            as a correlation between one or more symptoms **(Col. 9 line(s) 29-35)**;

      b.   collecting and storing symptom-related data about one or more symptoms,

      wherein collecting and storing the symptom-related data includes monitoring the

      network for one or more network events identified in the symptom-event rule

      (Col. 5 line(s) 29-63); and

      c.   detecting a problem within the network, wherein detecting the problem

      includes applying the problem-diagnosis rule to the symptom-related data **(Col.**

      11 line(s) 13-16);

5.   Baekelmans et al. do not teach receiving a request from a user to employ a
particular rule in managing a second network, separate from the first network; and
distributing to a device on the second network the one or more RBML documents
storing the particular rule.

6.   In the same field of endeavor Menard et al. teaches monitoring of client systems
(fig. 2 #202) on a different network than the management system server **(fig. 2 #206)**.
In which the management system server is able to analyze data collected from the client
systems. If the data analyze determines a problem exist the system manager notifies an
appropriate collector to run an appropriate corrective script. If the corrective script is
configured to be semi-automated then a user approval is need before executing the
corrective scrip on the host with the problem **(Col. 16 line(s) 36-44)**. Likewise, the
system manager can notify the appropriate user(s), in which a user will configure the
corrective actions manager to resolve a problem automatically or on demand **(Col. 12
line(s) 15-21, 39-46)**.

7.   Therefore, it would have been obvious to one of ordinary skill in the art at the
time the invention was made to modify Baekelmans et al. arrangement for automated
fault detection and fault resolution of a network device with Menard et al. teaching as
discussed above to allow for the capability of executing a script (rules) either
automatically or with user intervention to ensure hat the system remains and productive
to meet the needs of the business.

8.   In regards to claims 2 and 23 Baekelmans et al. discloses, reviewing the set of
rules to identify and resolve a conflict between two or more rules in the set **(Col. 9
line(s) 63-67)**.

9.   In regards to claims 3 and 24 Baekelmans et al. discloses, storing the one or
more RBML documents in a rule repository, wherein the rule repository includes one or
more directories containing RBML documents **(Col. 7 line(s) 42-53)**.

10.   In regards to claims 4 and 25 Baekelmans et al. discloses, wherein a RBML
document storing the problem-diagnosis rule includes: a problem-definition tag
describing a problem; and a correlation tag identifying the correlation between one or
more symptoms, wherein the one or more symptoms are defined in one or more
symptom tags that include one or more pre-defined indicators associated with the one
or more symptoms **(Col. 12 line(s) 40-47)**.

11.   In regards to claims 5, 12, 26, and 33 Baekelmans et al. discloses, wherein the
step of detecting a problem within the network further comprises the steps of:

        d.   comparing the symptom-related data to the one or more pre-defined

        indicators associated with a particular symptom to determine whether the

        particular symptom exists in the symptom-related data **(Col. 11 line(s) 40-51 and

        65-67)**;

   e.   repeating the step of comparing the symptom-related data for all

   symptoms identified in the correlation tag of the RBML document storing the

   problem-diagnosis rule **(Col. 11 line(s) 40-51 and 66-67)**; and

   f.   only if all symptoms identified in the correlation tag exist, determining that

   the problem identified in the problem-definition tag is detected **(Col. 12 line(s)**

   11-16).

12.   In regards to claims 6 and 27 Baekelmans et al. discloses, wherein a RBML

document storing the symptom-event rule includes: an event tag identifying the

particular event occurring on the network **(Col. 12 line(s) 40-47)**; and a symptom tag

identifying a symptom as a generalized abstraction of the particular event **(Col. 12**

line(s) 40-47).

13.   In regards to claims 7, 13, 28, and 34 Baekelmans et al. discloses, wherein the

RBML document storing the symptom-event rule further includes: a profile tag

identifying a particular network device **(Col. 12 line(s) 40-47)**; and a command tag

identifying a data-collection command, wherein the data-collection command, when

executed on the particular network device, returns symptom-related data associated

with the particular network device **(Col. 6 line(s) 29-45)**.

14.   In regards to claims 8 and 29 Baekelmans et al. discloses, the set of rules further

includes a problem-correction rule defining one or more corrective actions capable of

correcting the problem within the network **(Col. 12 line(s) 16-19)**; and the method

further comprises the step of recommending to a user one or more corrective actions

defined in a RBML document storing the problem-correction rule **(Col. 12 line(s) 16-19)**.

15.   In regards to claims 9 and 30 Baekelmans et al. discloses, the step of applying to

a network device, without user intervention, one or more corrective actions defined in

the problem-correction rule **(Col. 12 line(s) 20-22)**.

16.   In regards to claims 11 and 32 Baekelmans et al. discloses, a method and a

computer-readable storage medium for defining a Rule-Based Markup Language

("RBML") to describe a set of rules for managing a first network among a plurality of

networks **(Col. 7 line(s) 10-19, Col. 10 line(s) 46-49)**, the method comprising the

computer-implemented and a computer-readable storage medium carrying one or more

sequences of instructions for defining a Rule-Based Markup Language ("RBML") to

describe a set of rules for managing a network, which instructions, when executed by

one or more processors, cause the one or more processors to carry out the steps of:

   g.   creating one or more RBML documents for storing the set of rules,

   wherein the one or more RBML documents include one or more tags defining

   one or more rule elements **(Col. 7 line(s) 42-53 and Col. 9 line(s) 1-7)**, and

   wherein:

      iii.   a RBML document storing a symptom-event rule from the set of

      rules includes **(Col. 9 line(s) 8-16)**:

(1)   an event tag identifying a particular event occurring on the network **(Col. 12 line(s) 40-47)**; and

(2)   a symptom tag identifying a symptom as a generalized abstraction of the particular event **(Col. 12 line(s) 40-47)**; and

iv.   a RBML document storing a problem-diagnosis rule from the set of rules includes **(Col. 9 line(s) 29-35)**:

(3)   a problem-definition tag describing a problem; and a correlation tag identifying a correlation between one or more symptoms, wherein the one or more symptoms are defined in one or more symptom tags that include one or more pre-defined indicators associated with the one or more symptoms **(Col. 12 line(s) 40-47)**; and

v.   generating, from information stored in one or more tags of the one or more RBML documents, one or more sequences of instructions, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of: **(Fig. 4)**

(4)   collecting and storing symptom-related data about one or more symptoms, wherein collecting and storing the symptom-related data includes monitoring the network for one or more network events identified in the symptom-event rule **(Col. 5 line(s) 29-63)**; and

(5)   detecting a problem within the network **(Col. 11 line(s) 13-16)**, wherein detecting the problem includes applying the problem-diagnosis rule to the symptom-related data **(Col 12 line(s) 20-22)**;

17.   Baekelmans et al. do not teach receiving a request from a user to employ a particular rule in managing a second network, separate from the first network; and distributing to a device on the second network the one or more RBML documents storing the particular rule.

18.   In the same field of endeavor Menard et al. teaches monitoring of client systems **(fig. 2 #202)** on a different network than the management system server **(fig. 2 #206)**. In which the management system server is able to analyze data collected from the client systems. If the data analyze determines a problem exist the system manager notifies an appropriate collector to run an appropriate corrective script. If the corrective script is configured to be semi-automated then a user approval is need before executing the corrective scrip on the host with the problem **(Col. 16 line(s) 36-44)**. Likewise, the system manager can notify the appropriate user(s), in which a user will configure the corrective actions manager to resolve a problem automatically or on demand **(Col. 12 line(s) 15-21, 39-46)**.

19.   Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Baekelmans et al. arrangement for automated

fault detection and fault resolution of a network device with Menard et al. teaching as
discussed above to allow for the capability of executing a script (rules) either
automatically or with user intervention to ensure hat the system remains and productive
to meet the needs of the business.

20.   In regards to claims 14 and 35 Baekelmans et al. discloses, the step of creating
one or more RBML documents further includes creating a RBML document for storing a
problem-correction rule defining one or more corrective actions capable of correcting
the problem within the network **(Col. 12 line(s) 20-22)**; and the step of generating
instructions includes generating one or more sequences of instructions, which
instructions, when executed by the one or more processors, cause the one or more
processors to carry out the step of recommending to a user the one or more corrective
actions defined in the RBML document storing the problem-correction rule **(Fig. 4)**.

21.   in regards to claim 15 Baekelmans et al. discloses, an apparatus for rule-based
network management, comprising:

        h.   a rule editor for creating and storing, in one or more Rule-Based Markup

        Language ("RBML") documents containing one or more tags, a set of rules

        employed in managing a first network among a plurality of networks **(Col. 7

        line(s) 10-19, Col. 10 line(s) 46-49)**, wherein the set of rules includes **(Col. 9

        line(s) 63-67)**:

      vi.   a symptom-event rule that identifies as a symptom a particular

      event occurring within the network **(Col. 9 line(s) 8-16)**; and

      vii.   a problem-diagnosis rule that defines a problem within the network

      as a correlation between one or more symptoms **(Col. 9 line(s) 29-35)**;

i.   one or more processors **(Fig. 1 #24)**;

j.   a diagnosis engine including one or more stored sequences of instructions

which, when executed by the one or more processors, cause the one or more

processors to carry out the steps of **(Col. 7 line(s) 54-61)**:

      viii.   collecting and storing symptom-related data about one or more

      symptoms, wherein collecting and storing the symptom-related data

      includes monitoring the network for one or more network events identified

      in the symptom-event rule **(Col. 5 line(s) 29-63)**; and

      ix.   detecting a problem within the network **(Col. 11 line(s) 13-16)**,

      wherein detecting the problem includes applying the problem-diagnosis

      rule to the symptom-related data **(Col 12 line(s) 20-22)**;

k.   a rule broker configured to receive a request from a user to apply a

particular rule in managing a second network, separate from the first network,

and to distribute to a device on the second network the one or more RBML

documents storing the particular rule **(Col. 9 line(s) 44-49)**.

22.   Baekelmans et al. do not teach receiving a request from a user to employ a

particular rule in managing a second network, separate from the first network; and

distributing to a device on the second network the one or more RBML documents

storing the particular rule.

23.   In the same field of endeavor Menard et al. teaches monitoring of client systems

(fig. 2 #202) on a different network than the management system server **(fig. 2 #206)**.

In which the management system server is able to analyze data collected from the client

systems. If the data analyze determines a problem exist the system manager notifies an

appropriate collector to run an appropriate corrective script. If the corrective script is

configured to be semi-automated then a user approval is need before executing the

corrective scrip on the host with the problem **(Col. 16 line(s) 36-44)**. Likewise, the

system manager can notify the appropriate user(s), in which a user will configure the

corrective actions manager to resolve a problem automatically or on demand **(Col. 12

line(s) 15-21, 39-46)**.

24.   Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Baekelmans et al. arrangement for automated

fault detection and fault resolution of a network device with Menard et al. teaching as

discussed above to allow for the capability of executing a script (rules) either

automatically or with user intervention to ensure hat the system remains and productive

to meet the needs of the business.

25.   In regards to claim 16 Baekelmans et al. discloses, wherein the rule editor is
capable of providing to a user means for reviewing the set of rules to identify and
resolve a conflict between two or more rules in the set **(Col. 9 line(s) 63-67)**.

26.   In regards to claim 17 Baekelmans et al. discloses, the problem-diagnosis rule
defining the correlation between one or more symptoms includes one or more pre-
defined indicators associated with the one or more symptoms **(Col. 9 line(s) 29-35)**;
and the diagnosis engine instructions for carrying out the step of detecting a problem
within the network further include instructions **(Col. 7 line(s) 54-61)** for carrying out the
steps of:

    l.   comparing the symptom-related data to the one or more pre-defined
    indicators associated with a particular symptom to determine whether the
    particular symptom exists in the symptom-related data **(Col. 11 line(s) 40-51 and
    65-67)**;

    m.   repeating the step of comparing the symptom-related data for all
    symptoms identified in the correlation tag of the RBML document storing the
    problem-diagnosis rule **(Col. 11 line(s) 40-51 and 66-67)**; and

    n.   only if all symptoms identified in the correlation tag exist, determining that
    the problem identified in the problem-definition tag is detected **(Col. 12 line(s)
    11-16)**.

27.   In regards to claim 18 Baekelmans et al. discloses, wherein the symptom-event rule further includes: information identifying a particular network device **(Col. 9 line(s) 9-11)**; and a data-collection command, wherein the data-collection command, when executed on the particular network device, returns symptom-related data associated with the particular network device **(Col. 9 line(s) 16-19)**.

28.   In regards to claim 19 Baekelmans et al. discloses, the set of rules further includes a problem-correction rule defining one or more corrective actions capable of correcting the problem within the network **(Col. 12 line(s) 16-19)**; and the diagnosis engine further includes instructions which, when executed by the one or more processors, cause the one or more processors to carry out the step of recommending to a user one or more corrective actions defined in the problem correction rule **(Fig. 4)**.

29.   In regards to claim 20 Baekelmans et al. discloses, wherein the diagnosis engine further includes instructions which, when executed by the one or more processors, cause the one or more processors to carry out the step of applying to a network device, without user intervention, one or more corrective actions defined in the problem-correction rule **(Col. 12 line(s) 20-22)**.

Response to Arguments

30.   Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

31.   The applicant argues, "In addressing original claim 10, the Office Action contends

that Baekelmans discloses a first network in a plurality of networks in the form of the

Internet. (Office Action, page 8, paragraph 15.) This reflects an incorrect interpretation

of applicants' claims and disclosure. The "network" referenced in the claims is a

managed network, because the claimed approach recites monitoring events of network

devices and it is only possible to receive event data from devices that are managed in

some way. In Baekelmans, only one set of "customer premises resources 12" is shown,

not a plurality of sets of managed customer premises resources 12. Baekelmans clearly

shows customer premises resources 12 separate from Internet 17 to distinguish the

two. (remarks, pg. 15)." Baekelman et al. disclose monitoring devices a plurality of

networks (**Col. 7 line(s) 10-19, Col. 10 line(s) 46-49**). Wherein the data is collected by

a plurality of customer premises resources 12 and distributed data collection engines

(DDCE) 24, geographically located by regions, and processed by the centralized

support resources 14 **(Col. 7 line(s) 10-19)**.

Conclusion

32.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Richardson (US 6,317,788) robot policies for monitoring

availability and response of network performance as seen from user perspective.

        Any inquiry concerning this communication or earlier communications from the

examiner should be directed to La Juania N. Mouzon whose telephone number is 571-

270-3045. The examiner can normally be reached on Monday - Friday 8:00-5:00, 1st

Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LNM

/Yasin M Barqadle/

Primary Examiner, Art Unit 2153